

HORIZON
2020

UNMANNED TRAFFIC MANAGEMENT 4D PATH PLANNING TECHNOLOGIES FOR DRONE SWARM TO ENHANCE SAFETY AND SECURITY IN TRANSPORT

Fact Sheet

Project Information

LABYRINTH

Grant agreement ID: 861696

[Project website](#)

DOI

[10.3030/861696](https://doi.org/10.3030/861696)

Project closed

EC signature date

4 May 2020

Start date

1 June 2020

End date

31 May 2023

Funded under

SOCIETAL CHALLENGES - Smart, Green And Integrated Transport

Total cost

€ 5 291 805,00

EU contribution

€ 4 957 076,25

Coordinated by

UNIVERSIDAD CARLOS III DE MADRID



Spain

Project description

Air traffic controllers for drones

Drone technologies are increasingly presented as a potential efficient way to improve the safety and efficiency of civil transport. Nevertheless, so far, security issues have made it impossible to fly drones at low altitudes in most civil environments, since

technologies related to drone guidance and remote control have not reached the required readiness level. To ensure airspace safety, a traffic management system for drones is essential. The EU-funded LABYRINTH project will study centralised planification systems capable of communicating with drones operating in certain areas and compute paths to avoid collisions. The project will create a U-space-based technology to meet the needs of autonomous drone applications. This technology will be deployed in different civil scenarios such as roads, seaports, and airports.

Fields of science (EuroSciVoc)

[engineering and technology](#) > [electrical engineering, electronic engineering, information engineering](#) > [electronic engineering](#) > [robotics](#) > [autonomous robots](#) > **[drones](#)**

[social sciences](#) > [social geography](#) > [transport](#) > [transport planning](#) > **[air traffic management](#)**



Keywords

[UAV](#)

[4D PATH PLANNING](#)

[U-SPACE](#)

[UAS Transport Management](#)

[Fast Marching Square Algorithms](#)

Programme(s)

[H2020-EU.3.4. - SOCIETAL CHALLENGES - Smart, Green And Integrated Transport](#)

MAIN PROGRAMME

Topic(s)

[MG-2-8-2019 - Innovative applications of drones for ensuring safety in transport](#)

Call for proposal

[H2020-MG-2018-2019-2020](#)

[See other projects for this call](#)

Sub call

H2020-MG-2019-TwoStages

Funding Scheme

[RIA - Research and Innovation action](#)

Coordinator



UNIVERSIDAD CARLOS III DE MADRID

Net EU contribution

€ 612 164,34

Total cost

€ 612 164,34

Address

CALLE MADRID 126
28903 Getafe (Madrid)

 **Spain** 

Region

Comunidad de Madrid > Comunidad de Madrid > Madrid

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Participants (12)



ARQUIMEA AEROSPACE DEFENCE AND SECURITY SL

 **Spain**

Net EU contribution

€ 864 725,00

Address

**CALLE VERANO 9 POLIGONO INDUSTRIAL LAS MONJAS
28850 TORREJON DE ARDOZ** 

Region

Comunidad de Madrid > Comunidad de Madrid > Madrid

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 864 725,00




DEUTSCHES ZENTRUM FUR LUFT - UND RAUMFAHRT EV

 Germany

Net EU contribution

€ 1 097 500,00

Address

**LINDER HOHE
51147 Koln** 

Region

Nordrhein-Westfalen > Köln > Köln, Kreisfreie Stadt

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 1 097 500,00



JEFATURA CENTRAL DE TRAFICO

 Spain

Net EU contribution

€ 72 500,00

Address

CALLE JOSEFA VALCARCEL 28
28027 Madrid 

Region

Comunidad de Madrid > Comunidad de Madrid > Madrid

Activity type

Public bodies (excluding Research Organisations and Secondary or Higher Education Establishments)

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 72 500,00



TELEFONICA INNOVACION DIGITAL SL

 Spain

Net EU contribution

€ 379 245,63

Address

RONDA DE LA COMUNICACION S/N EDIFICO CENTRAL
28050 MADRID 

Region

Comunidad de Madrid > Comunidad de Madrid > Madrid

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 379 245,63



INSTITUTO NACIONAL DE TECNICA AEROSPACIAL ESTEBAN TERRADAS

Spain

Net EU contribution

€ 555 170,00

Address

CR TORREJON AJALVIR KM 4 2
28850 Torrejon De Ardoz Madrid

Region

Comunidad de Madrid > Comunidad de Madrid > Madrid

Activity type

Research Organisations

Links

[Contact the organisation](#) [Website](#)

[Participation in EU R&I programmes](#)

[HORIZON collaboration network](#)

Total cost

€ 555 170,00



EUROCONTROL - EUROPEAN ORGANISATION FOR THE SAFETY OF AIR NAVIGATION

Belgium

Net EU contribution

€ 0,00

Address

Rue de la Fusée 96
1130 Bruxelles / Brussel

Region

Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest > Région de Bruxelles-Capitale/ Brussels Hoofdstedelijk Gewest > Arr. de Bruxelles-Capitale/Arr. Brussel-Hoofdstad

Activity type

Research Organisations

Links

[Contact the organisation](#) [Website](#)

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 334 728,75



DIN DEUTSCHES INSTITUT FUER NORMUNG EV

 Germany

Net EU contribution

€ 156 667,50

Address

BURGGRAFENSTRASSE 6

10787 Berlin 

Region

Berlin > Berlin > Berlin

Activity type

Other

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 156 667,50



AUTORITA DI SISTEMA PORTUALE DEL MAR LIGURE ORIENTALE

 Italy

Net EU contribution

€ 131 250,00

Address

VIA DEL MOLO 1

19126 La Spezia 

Region

Nord-Ovest > Liguria > La Spezia

Activity type

Public bodies (excluding Research Organisations and Secondary or Higher Education Establishments)

Links

[Contact the organisation](#)

[Participation in EU R&I programmes](#)

[HORIZON collaboration network](#)

Total cost

€ 131 250,00



AIT AUSTRIAN INSTITUTE OF TECHNOLOGY GMBH

 Austria

Net EU contribution

€ 306 266,28

Address

GIEFINGGASSE 4

1210 Wien 

Region

Ostösterreich > Wien > Wien

Activity type

Research Organisations

Links

[Contact the organisation](#) [Website](#)

[Participation in EU R&I programmes](#)

[HORIZON collaboration network](#)

Total cost

€ 306 266,28



PONS SEGURIDAD VIAL SL

 Spain

Net EU contribution

€ 330 000,00

Address

GLORIETA DE RUBEN DARIO,4

28010 Madrid 

SME 

Yes

Region

Comunidad de Madrid > Comunidad de Madrid > Madrid

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 330 000,00



AYUNTAMIENTO DE MADRID

 Spain

Net EU contribution

€ 155 687,50

Address

CALLE MONTALBAN 1

28014 MADRID 

Region

Comunidad de Madrid > Comunidad de Madrid > Madrid

Activity type

Public bodies (excluding Research Organisations and Secondary or Higher Education Establishments)

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 155 687,50



PKF ATTEST INNCOME SL

 Spain

Net EU contribution

€ 295 900,00

Address

CALLE ORENSE 81 7 PLANTA
28020 Madrid 

SME 

Yes

Region

Comunidad de Madrid > Comunidad de Madrid > Madrid

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

€ 295 900,00

Last update: 1 August 2024

Permalink: <https://cordis.europa.eu/project/id/861696>

European Union, 2025